Journal of Multidisciplinary Healthcare

Dovepress
Taylor & Francis Group

Open Access Full Text Article

ORIGINAL RESEARCH

Determinants of Asian Students' Medical Satisfaction in China: A Cross-Sectional Survey

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Background: With rapid economic globalization and cultural exchange, the number of international students in China has been increasing, particularly from Asian countries. Investigating Asian students' satisfaction with medical services in China and identifying key determinants of their health care experiences are critical for improving service quality.

Methods: A cross-sectional study was conducted at one university each in Beijing, Nanning and Baise from January to October 2022. A total of 164 Asian students were recruited through random sampling. Data were collected via an online bilingual (Chinese-English) questionnaire, covering participants' demographic information and medical experiences in both China and their home countries. ANOVA, independent-sample *t* test, paired-samples *t* test and multiple linear regression analysis were used to analyze the data.

Results: Students in underdeveloped regions (Nanning and Baise) reported significantly lower overall satisfaction scores (7.26 ± 1.48) compared to those in developed region (Beijing: 8.41 ± 1.25). The convenience of registration, impression of hospital services and facilities, convenience of hospital space layout, waiting time for examination, respect of medical staff, listening by medical staff, understanding of medical staff, and timely response to complaints were key factors that influenced the overall experience of Asian students when seeking medical treatment. The overall satisfaction score for medical experiences in China (8.04) was significantly higher than in students' home countries (6.96; $p < 0.001$).

Conclusion: Asian international students' medical experiences within China exhibit significant regional disparities. Key determinants of satisfaction—including registration convenience, hospital facilities, staff responsiveness, and complaint resolution—highlight systemic gaps in service quality. Strengthening these areas is essential to support China's role as a global education destination.

Keywords: medical experience, Asian students, satisfaction, influence factors

Introduction

In the new era of rapid economic globalization and cultural integration, China has become a prominent destination for international students, particularly from Asian countries. According to statistics from the official website of the Chinese Ministry of Education, the number of international students in China reached over 440,000 in 2021, marking a 35% increase compared to 2020. In 2021, overseas students in China came from a total of 205 countries and regions, reaching a record high.[1,2] With the development of economic and comprehensive strength, China has emerged as a large destination country for study in Asia.[3] Given that Asian students come from different countries with economic, educational and cultural backgrounds that differ from China,[4] they may face difficulties accessing medical care in China, such as language barriers, differences in the medical environment, and issues with doctor-patient communication. Compounding these challenges, studies indicate that international students are at heightened risk of obesity-related diseases and mental health issues (eg, depression) stemming from dietary adaptations, lifestyle changes, and cross-cultural stress.[5–7] These factors collectively amplify their demand for accessible and culturally sensitive health care services.[8] Improving international students' medical experiences is thus critical not only for safeguarding their well-being

Received: 24 December 2024
Accepted: 19 March 2025
Published: 29 March 2025

but also enhancing China's global educational competitiveness and international reputation. Therefore, studying the medical experiences of Asian students in China is crucial for improving the quality of international education in our country and enhancing the overall satisfaction of international students.

Patient medical experience is an important concept in health care policy and management, providing evidence for optimizing health policies and improving medical services.[9] Since 2015, the Chinese government has implemented the Further Improvement of Medical Services Action Plan, emphasizing a patient-centered service philosophy. Yet, the study of medical experiences among international students, as a special group of patients, is relatively scarce. Most existing studies on international health care services focused on middle- and high-income groups, such as expatriate businessmen and tourists,[10–13] and are mainly theoretical,[14,15] with limited empirical research and even less research on international students. Zhu et al concluded that medical experience policies in foreign countries have accumulated certain practices and research, which have an enlightening effect on the in-depth exploration of patient experience health policy perspectives in our country.[16] Therefore, conducting research on the medical experiences of international students in China can help optimize our medical service policies and improve the quality of medical services by drawing on international experience.

In the current study, we conducted an online questionnaire survey of Asian international students' medical experiences in three cities: Beijing, Nanning, and Baise. The study aimed to assess their perception and satisfaction with medical services in China and compare these experiences with those in their home countries. By analyzing the factors affecting satisfaction, the study provided references for improving our country's medical services, particularly for enhancing health and medical services for Asian international students.

Methods

Aim, Design and Setting of the Study

This study aimed to investigate factors influencing Asian students' medical experiences in China and differences between their medical experiences in China and their home countries, thereby providing a theoretical basis for improving international students' medical care in China. A cross-sectional online survey was conducted using a two-stage sampling strategy combining purposive and random sampling techniques. The study was conducted between January and October 2022 at one university each in Beijing (developed region), Nanning and Baise (underdeveloped regions). This study complied with the Declaration of Helsinki and was reviewed and approved by the Human Research Ethics Committee of Guangxi Medical University (Ethical Review No. 20210188).

Study Subjects

Three universities were purposively selected in Beijing, Nanning and Baise based on China's regional development stratification. Through collaboration with the student affairs office of the International Education School/Department of each university, demographic data of all registered Asian students were obtained. Eligibility screening and randomization were performed in two stages: (1) student IDs meeting inclusion criteria were extracted, and (2) computerized randomization using Excel's RAND() function selected 10% of the eligible pool. The inclusion criteria were as follows: (1) voluntary participation, (2) Asian nationality, (3) healthcare-seeking experience in China. The exclusion criteria was cognitive impairment or inability to complete the questionnaire independently.

Questionnaire Design

The questionnaire comprised three sections: demographic, medical experience in China, and medical experience in the student's home country. The indicators of waiting time and promptness of response to complaints reflect the efficiency of medical services; the indicators of convenience of registration, impression of hospital services and convenience of hospital space layout reflect the convenience of medical services; the indicators of whether medical staff treat patients with respect, listen to patients and understand questions reflect the attitude of medical services. Ordinal scale items (eg, 5-point Likert scales) were numerically coded according to the response hierarchy (1="very dissatisfied" to 5="very satisfied"). Pilot testing with 15 Asian international students at a university in Nanning demonstrated feasibility. The

5-point scale was selected over 7-point alternatives through pilot testing, demonstrating a better completion rate (98% vs 89%) in our cross-cultural context. Ambiguous items were revised based on feedback, including simplifying medical terminology and adding visual aids for rating scales.

Data Collection

Data collection was implemented through face-to-face QR code scanning: trained investigators provided pre-screened participants with a standardized QR code of Wenjuanxing platform (www.wjx.cn) linked to the survey, ensuring on-site completion via mobile devices. Real-time submission monitoring allowed immediate clarification of participant queries. Mandatory responses and logic checks by two investigators ensured data completeness.

Statistical Analysis

The internal consistency reliability of the questionnaire was evaluated using Cronbach's α, with $\alpha > 0.70$ indicating satisfactory psychometric properties as per conventional psychometric standards.[17] The construct validity of the questionnaire was assessed using the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity, which jointly evaluate the suitability of the data for factor analysis. A KMO value >0.70 and a statistically significant Bartlett's test ($p < 0.05$) confirmed the adequacy of the sample distribution for structural validity analysis.[18] Descriptive statistics summarized demographic characteristics. Continuous variables with normal or approximately normal distributed were expressed as the mean ± standard deviation (SD), while categorical variables were expressed as frequencies/percentages. ANOVA and independent *t*-tests compared subgroup experiences. The hypotheses of ANOVA and *t*-tests were the difference of ratings of medical experience in different subgroups was not significant. Service quality indicators were entered into multivariate linear regression to identify predictors of overall satisfaction. Paired *t*-tests analyzed China vs home-country experience differences. The study was statistically analyzed using SPSS 20.0 software, and the level of two-sided significance was set at $\alpha = 0.05$, with $p < 0.05$ indicating a statistically significant difference.

Results

Reliability and Validity of the Questionnaire

Reliability and validity assessments were conducted separately for the medical experience ratings in China and their home-country health care evaluations. Cronbach's α demonstrated good internal consistency (in China: $\alpha = 0.789$; in their home country: $\alpha = 0.743$), exceeding the conventional threshold of 0.70. Standardized Cronbach's α showed marginal increases (in China: 0.805; in their home country: 0.758), further supporting scale reliability with minimal variance from non-standardized values. Structural validity was verified through factor analysis prerequisites: KMO measures exceeded the recommended threshold of 0.7 (in China: 0.821; in their home country: 0.766), and the Bartlett's tests of sphericity reached statistical significance (both $p < 0.001$). Collectively, these findings validated the questionnaire's suitability for cross-cultural medical experience assessments.

Demographic Information About the Study Population

The study achieved complete questionnaire recovery with 164 valid responses (100% response rate). Among the study participants, the male-to-female ratio was 0.89:1. Furthermore, 87.2% of the study participants were unmarried, 71.3% were bachelor degree candidates, and 95.1% had received scholarships. The top three countries where they came from were Vietnam, Cambodia and Laos. A substantial majority (82.3%) reported annual household income of $10,000 or less. Geographically, 67.7% studied in developed region (Beijing) versus 32.3% in underdeveloped regions (Nanning or Baise).

Both in China and in their home countries, the most common outpatient clinics they visited were general clinics. In China, the most common levels of outpatient clinics they visited were community outpatient/hospital and school infirmary, and the most common method of registration was manual window registration. While in their home countries, the most common level of outpatient clinics they visited was general practitioners (32.3%), and the most common method of registration was on-site registration (59.1%) (Table 1).

Table 1 Basic Information and Medical Attendance of the Study Participants

Variables	Number	Composition Ratio (%)
Basic information about the research subjects		
Sex		
Male	77	47.0
Female	87	53.0
Marital status		
Unmarried	143	87.2
Married	21	12.8
Academic qualification		
Bachelar degree candidate	117	71.3
Master degree candidate	41	25.0
PhD postgraduate	6	3.7
Scholarship student		
Yes	156	95.1
No	8	4.9
Country		
Vietnam	42	25.6
Cambodia	28	17.1
Laos	21	12.8
India	15	9.1
Indonesia	11	6.7
Myanmar	11	6.7
Malaysia	8	4.9
Thailand	8	4.9
Other Asian Countries	20	12.4
Annual household income		
$5000 and below	105	64.0
$5000–10,000	34	20.7
$10,000–15,000	10	6.1
$15,000 and above	15	9.2
Study Location of international students		
Developed region	111	67.7
Underdeveloped regions	53	32.3
Access to medical care in China		
Most visited clinics		
General outpatient	123	75.0
Specialist outpatient	18	11.0
Specialized outpatient	13	7.9
Outpatient service	10	6.1
Most frequently visited clinic levels		
School infirmary	46	28.0
Community outpatient/hospital	53	32.3
Public secondary hospital	18	11.0
Public tertiary hospital	32	19.5
Private hospitals	15	9.2

(*Continued*)

Table 1 (Continued).

Variables	Number	Composition Ratio (%)
Commonly used registration methods		
Manual window registration	66	40.2
On-site registration	33	20.1
Book by phone	15	9.2
Official website booking	14	8.5
Mobile booking	29	17.7
Other	7	4.3
Access to medical care in their home country		
Most visited clinics		
General outpatient clinic	110	67.1
Specialist clinics	54	32.9
Most frequently visited clinic levels		
General practitioner	53	32.3
Specialist outpatient	31	18.9
Public hospitals	43	26.2
Private hospitals	32	19.5
Other	5	3.1
Commonly used registration methods		
On-site registration	97	59.1
Book by phone	34	20.7
Official website booking	7	4.3
Mobile booking	20	12.2
Other	6	3.7

Ratings of the Overall Perception of the Medical Experience of Asian International Students with Different Characteristics

We divided the study subjects into groups according to different characteristics and compared whether there were differences in medical scores among groups with different characteristics. We found that there were differences in the overall scores of medical experiences among Asian international students in different regions, as shown in Table 2. The average score of the overall experience rating of Asian students who studied in underdeveloped regions for accessing medical care in China was 7.26 ± 1.48, and the average score of the overall experience rating of international students who studied in developed region for accessing medical care in China was 8.41 ± 1.25. The difference was statistically significant (t=−5.135, $p < 0.001$). The mean score of the overall experience rating of Asian students studying in underdeveloped regions was 6.49 ± 2.03 in their own country, while the mean score of the overall experience rating of Asian students studying in developed regions was 7.17 ± 2.08 in their own country with no statistically significant difference (t=−1.974, $p = 0.050$). There were no statistically significant differences in the overall perception of health care experience scores in China or in the participants' home country by sex (in China: t=0.784, $p = 0.434$; in their home country: t=0.281, $p = 0.779$), marital status (in China: t=−0.527, $p = 0.599$; in their home country: t=0.781, $p = 0.436$), education (in China: F=0.004, $p = 0.996$; in their home country: F=0.327, $p = 0.721$), household income (in China: F=0.942, $p = 0.422$; in their home country: t=0.553, $p = 0.647$), or whether they were on a scholarship (in China: t=−0.179, $p = 0.858$; in their home country: t=−0.763, $p = 0.447$).

https://doi.org/10.2147/JMDH.S514212

Table 2 Ratings of the Overall Experience of Medical Care for Asian Students with Different Characteristics

		Score for Medical Experience in China	Score for Medical Experience in Home Country
Sex	Male	8.13±1.52	7.00±2.15
	Female	7.95±1.36	6.91±2.03
	t	0.784	0.281
	p	0.434	0.779
Marital status	Unmarried	8.01±1.44	7.00±2.05
	Married	8.19±1.40	6.62±2.36
	t	−0.527	0.781
	p	0.599	0.436
Academic qualifications	Bachelor degree candidate	8.03±1.40	7.03±1.91
	Master degree candidate	8.05±1.61	6.73±2.65
	PhD postgraduate	8.00±0.63	6.83±0.41
	F	0.004	0.327
	p	0.996	0.721
Annual household income	$5000 and below	7.97±1.44	6.81±2.09
	$5000–10,000	8.18±1.73	7.12±2.64
	$10,000–15,000	7.60±0.52	7.10±0.88
	$15,000 and above	8.47±0.83	7.47±0.83
	F	0.942	0.553
	p	0.422	0.647
Location of international students	Underdeveloped regions	7.26±1.48	6.49±2.03
	Developed region	8.41±1.25	7.17±2.08
	t	−5.135	−1.974
	p	<0.001***	0.050
Scholarship student	Yes	8.03±1.45	6.92±2.12
	No	8.13±0.99	7.50±1.07
	t	−0.179	−0.763
	p	0.858	0.447

Note: ***Represented *p* value <0.001.

Factors Influencing Asian Students' Ratings of Their Overall Experience of Medical Care

The results after adjusting for the region of study were shown in Table 3. Multivariate analysis identified that the convenience of registration, impression of hospital services and facilities, convenience of hospital space layout, waiting time for

Table 3 Factors That Influence the Overall Experience Rating of Asian Students' Access to Health Care

Projects	Medical Experience in China		Medical Experience in Home Country	
	β (95% CI)	*P* value	β (95% CI)	*P* value
Convenience of registration	0.151 (0.057, 0.246)	0.002**	0.205 (0.034, 0.376)	0.019*
Impression of hospital services and facilities	0.304 (0.151, 0.457)	<0.001***	0.457 (0.241, 0.672)	<0.001***
Convenience of hospital space layout	0.401 (0.245, 0.558)	<0.001***	0.799 (0.593, 1.005)	<0.001***
Inspection waiting time	0.411 (0.31, 0.512)	<0.001***	0.501 (0.332, 0.67)	<0.001***
Health care professionals treat you with respect	0.263 (0.131, 0.395)	<0.001***	0.336 (0.088, 0.583)	0.008**
Health care professionals listen to you	0.521 (0.333, 0.71)	<0.001***	0.359 (0.098, 0.62)	0.007**
Health care professionals explain the problem well enough to understand	0.353 (0.188, 0.407)	<0.001***	0.469 (0.23, 0.708)	<0.001***
Complaints are responded to in a timely manner	0.319 (0.231, 0.407)	<0.001***	0.491 (0.341, 0.64)	<0.001***

Notes: *Represented 0.01≤ *p* value <0.05, ** represented 0.001≤ *p* value <0.01, *** represented *p* value <0.001.

Table 4 Comparative Analysis of Ratings of Perceived Health Care Experience Indicators in Different Countries

	Medical Experience in China	Medical Experience in Home Country	t	*P*
	Mean ± Standard Deviation	Mean ± Standard Deviation		
Convenience of registration	3.46±0.97	2.99±1.02	11.865	<0.001***
Impressions of hospital services and facilities	3.80±0.76	3.33±0.90	12.159	<0.001***
Convenience of hospital space layout	3.80±0.72	3.25±0.87	14.080	<0.001***
Inspection waiting time	4.34±0.81	3.82±0.94	13.243	<0.001***
Health care professionals treat you with respect	3.32±0.79	2.71±0.78	12.706	<0.001***
Health care professionals listen to you	3.18±0.53	2.58±0.70	15.557	<0.001***
Health care professionals explained the problem well enough to understand	3.12±0.62	2.62±0.76	12.767	<0.001***
Complaints are responded to in a timely manner	3.82±1.05	3.30±1.20	13.243	<0.001***
Overall experience rating	8.04±1.43	6.95±2.08	11.997	<0.001***

Note: ***Represented *p* value <0.001.

examination, respect of medical staff, listening by medical staff, understanding of medical staff and timely response to complaints were all factors that influence the overall experience of Asian international students when seeking medical treatment. The overall experience rating of international students was influenced by the above factors. These influencing factors had statistical significance for the medical experience of Asian students in China and their home countries.

Analysis of the Perception of the Health Care Experience in Different Countries

When the study participants visited hospitals in China, their overall experience rating was 8.04, and the average value of all the indicators was above 3. The highest experience rating was 4.34 ± 0.81 for the waiting time for examination, and the lowest was 3.12 ± 0.62 for whether the medical staff understood their questions. The overall experience rating of the study participants was 6.95, except for individual indicators such as hospital service facilities, convenience of hospital space layout, waiting time for examination and promptness of response to complaints. All other evaluation indicators were below 3. The highest experience rating of waiting time for examination was 3.82 ± 0.94, and the lowest experience rating of whether medical staff listened to patients was 2.58 ±0.70. The results were shown in Table 4. The overall experience rating and the ratings of the indicators of the medical experience in China were significantly different than that in their home country ($p < 0.001$).

Discussion

General Information on the Medical Experience of Asian Students

The study revealed that Asian students in China had a relatively high overall experience rating for medical care in China compared to their home countries. This suggests that the medical services in China, especially in developed regions, are generally satisfactory to international students. The high ratings for factors such as waiting time and promptness of response to complaints indicate that the efficiency of medical services in China is recognized by Asian students. This finding is consistent with previous studies that highlighted the advantages of China's medical system in terms of efficiency and accessibility.[19] However, the students' home-country satisfaction difference suggests socioeconomic factors alone cannot fully explain disparities, warranting exploration of cultural competency gaps in underdeveloped regions.

Factors That Influence Asian Students' Ratings of Their Overall Experience of Medical Care

The study identified several factors that significantly influenced the overall experience of Asian students when seeking medical treatment in China. These factors include the convenience of registration, impression of hospital services and

facilities, convenience of hospital space layout, waiting time for examination, respect of medical staff, listening by medical staff, understanding of medical staff, and timely response to complaints. These findings are supported by previous research that emphasized the importance of these factors in patient satisfaction and overall medical experience.[20–23] For communication issues, including respect of medical staff, listening by medical staff, understanding of medical staff, and timely response to complaints, language barriers may be the primary reason. With the increasing number of international students coming to China, there is a growing demand for medical personnel with professional skills and a high level of English proficiency.[24,25] China needs to increase the education and job creation of bilingual health care personnel and establish a sound bilingual training model to improve the overall strength of health care personnel.[26]

The results also showed that there were significant differences in the overall experience ratings between students in developed and underdeveloped regions. Students in developed region (Beijing) had a higher overall experience rating compared to those in underdeveloped regions (Nanning and Baise). This significant regional disparity aligns with prior findings linking healthcare quality to regional economic development.[27] This gap likely stems from Beijing's advanced hospital infrastructure and digitalized services—factors critical for international patients.

The Current State of Asian Students' Perception of Their Medical Experience in Different Countries

The study found that Asian students rated their medical experiences in China higher than those in their home countries. This indicates that the medical services in China are generally better than those in their home countries. The higher ratings for factors such as waiting time and promptness of response to complaints in China suggest that the efficiency of medical services is a significant advantage. This finding is supported by previous studies that highlighted the efficiency and accessibility of medical services in China.[21] In most hospitals in China, smart hospital intelligent guidance services can be directly operated on internet terminals, which solves the problem of international students' difficulty seeing a doctor in China as part of the attempt to establish medical facilities with high-quality medical services.[28]

However, the study also revealed that there were some areas where the ratings were lower, such as the respect of medical staff, listening by medical staff, and understanding of medical staff. Although these ratings were higher than those in their home countries, they still indicate that there is room for improvement in the attitude of medical staff. This finding is consistent with previous studies that emphasized the importance of patient-centered care and the need for improvement in the attitudes of medical staff.[23,29]

There are some limitations in the current study. Firstly, the representation of the participants was limited because they were recruited in only three cities in China. In addition, the sampling size is not big enough to generalize the findings. Finally, the suggestions to improve their medical experience should be included in the questionnaire.

Conclusions

In summary, the current study reveals significant regional disparities in Asian international students' medical experiences within China, with students in underdeveloped regions (Nanning and Baise) reporting lower satisfaction compared to those in developed regions (Beijing). Efficiency and convenience of medical services and attitudes towards health care services significantly influence the medical experience of international students in China.

To improve the medical experiences of Asian international students in China, it is suggested that Chinese hospitals can promulgate corresponding policies to support international students in seeking medical treatment, combining with the advantages of China's internet, and set up bilingual consultations, bilingual physician diagnosis and treatment clinics, bilingual nurse service clinics, and bilingual medical complaint windows to further improve doctor–patient relationships.

Abbreviations

ANOVA, Analysis of variance; SD, standard deviation.

Data Sharing Statement

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Ethics Approval and Consent to Participate

This study was reviewed and approved by the Human Research Ethics Committee of Guangxi Medical University (Ethical Review No. 20210188). All participants were informed of the nature and purpose of the study, survey procedures, the sensitive nature of the questions, and confidentiality parameters, and submitted the informed consent forms online.

Consent for Publication

All participants were informed of the publication of this study and submitted the informed consent forms online.

Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

Funding

This work was supported by Guangxi Higher Education Undergraduate Education Reform Project (Grant No.: 2023JGA150) and the Guangxi Key Research and Development Program (GUIKE AB22080063).

Disclosure

The authors declare that they have no competing interests.

References

1. Di W, Zhang S, Lian X, et al. Research on cross-cultural adaptation and educational management of international students in China: case of African students at Zhejiang Normal University. *Front Psychol*. 2022;13:1009658. doi:10.3389/fpsyg.2022.1009658
2. Lei H, Quan T, Lin Z, Li X, Wang G. The prediction model of the educational scale of international students in China under the new development pattern of double cycle. *J Sci Teach Coll Univ*. 2022;42(05):23–30.
3. Yang Z. *International Students' Inflow: Motivation, Economic Effects and Strategic Choice of China* [PhD]. Nanjing Agricultural University; 2019.
4. Du X, Li J, Ye H. A study of the differences in the reasons for international students' cognitive difficulties of Chinese culture. *J Tianjin Univ*. 2022;24(02):131–136.
5. Ul Haq I, Mariyam Z, Li M, et al. A comparative study of nutritional status, Knowledge Attitude and Practices (KAP) and dietary intake between international and Chinese Students in Nanjing, China. *Int J Environ Res Public Health*. 2018;15(9):1910. doi:10.3390/ijerph15091910
6. Yu B, Chen X, Li S, Liu Y, Jacques-Tiura AJ, Yan H. Acculturative stress and influential factors among international students in China: a structural dynamic perspective. *PLoS One*. 2014;9(4):e96322. doi:10.1371/journal.pone.0096322
7. Liu Y, Chen X, Li S, Yu B, Wang Y, Yan H. Path analysis of acculturative stress components and their relationship with depression among international students in China. *Stress Health*. 2016;32(5):524–532. doi:10.1002/smi.2658
8. Hasan MI, Li XG, Valentino W, Ray A. Barriers to healthcare access for international students in China. *Mymensingh Med J*. 2017;26(1):184–193.
9. Ramsey SM, Brooks J, Briggs M, Hallett CE. Voiceless and vulnerable: an existential phenomenology of the patient experience in 21st century British hospitals. *Nurs Inq*. 2023;30(4):e12588. doi:10.1111/nin.12588
10. Sarfaty S, Arnold LK. Preparing for international medical service. *Emerg Med Clin North Am*. 2005;23(1):149–175. doi:10.1016/j.emc.2004.09.014
11. Woods JE, Kiely JM. Short-term international medical service. *Mayo Clin Proc*. 2000;75(3):311–313. doi:10.4065/75.3.311
12. Ma P, Li J, Zhao D, Li Y, Zhang C, Liu Z. lmprovement of direct-billing service for patients with commercial health insurance in high-end medical institutions. *Chin Hosp Manage*. 2019;39(04):72–73.
13. Luo Y. Research and thinking of promoting international high-end medical services. *Med Forum*. 2020;24(07):998–1000. doi:10.19435/j.1672-1721.2020.07.064
14. Huang X. Discussion of an effective nursing managers in the international medical department. *Chin J Misdiagnostics*. 2011;11(08):1863–1864.
15. Cun D, Cui W, Yu G. The international experience and reference of "Internet+" medical services. *Chin Hosp*. 2020;24(03):13–15. doi:10.19660/j.issn.1671-0592.2020.03.05
16. Zhu T, Wu H, Wang H, Wang H. Research and enlightenment of foreign patient experience from a policy perspective. *Chin Health Qual Manage*. 2024;31(08):46–52. doi:10.13912/j.cnki.chqm.2024.31.8.10

17. Malik AA, Khan RA, Malik HN, Humayun A, Butt NS, Baig M. Assessing reliability and validity of Revised Biggs Two-Factor study process questionnaire to measure learning approaches among undergraduate medical students in Lahore, Pakistan. *J Pak Med Assoc*. 2019;69(3):337–342.
18. Ho Y, Kwon OY, Park SY, Yoon TY, Kim YE. Reliability and validity test of the Korean version of Noe's evaluation. *Korean J Med Educ*. 2017;29 (1):15–26. doi:10.3946/kjme.2017.49
19. Xu X, Yasmeen R, Shah WUH. Efficiency evaluation, regional technological heterogeneity and determinant of total factor productivity change in China's healthcare system. *Sci Rep*. 2024;14(1):19606. doi:10.1038/s41598-024-70736-5
20. Ferreira DC, Vieira I, Pedro MI, Caldas P, Varela M. Patient satisfaction with healthcare services and the techniques used for its assessment: a systematic literature review and a bibliometric analysis. *Healthcare*. 2023;11(5). doi:10.3390/healthcare11050639
21. Yan J, Yao J, Zhao D. Patient satisfaction with outpatient care in China: a comparison of public secondary and tertiary hospitals. *Int J Qual Health Care*. 2021;33(1). doi:10.1093/intqhc/mzab003
22. Thornton RD, Nurse N, Snavely L, Hackett-Zahler S, Frank K, DiTomasso RA. Influences on patient satisfaction in healthcare centers: a semi-quantitative study over 5 years. *BMC Health Serv Res*. 2017;17(1):361. doi:10.1186/s12913-017-2307-z
23. Alodhialah AM, Almutairi AA, Almutairi M. Key predictors of patient satisfaction and loyalty in Saudi healthcare facilities: a cross-sectional analysis. *Healthcare*. 2024;12(20):2050. doi:10.3390/healthcare12202050
24. Wang S, Liu H, Chen H. Survey of present medical services for foreigners by large public hospitals in Hangzhou. *Chin J Hosp Adm*. 2011;27 (5):355–358. doi:10.3760/cma.j.issn.1000-6672.2011.05.011
25. Li H, Xu Y. Thinking and practice of human resource management of nursing staff in foreign-related and special-needs medical services—A case study of Henan International Medical Center. *Human Res Dev*. 2020;(07):31–33. doi:10.19424/j.cnki.41-1372/d.2020.07.012
26. Ling D, Yan Y. Investigation and analysis on international students' satisfaction with medical service in Shanghai, China. *J Clin Nurs Pract*. 2019;5 (06):53–56.
27. Fu L, Xu K, Liu F, Liang L, Wang Z. Regional disparity and patients mobility: benefits and spillover effects of the spatial network structure of the health services in China. *Int J Environ Res Public Health*. 2021;18(3). doi:10.3390/ijerph18031096
28. He G, Jiawen K, Ting L. Study on medical behavior of international students and its influencing factors--taking Jiangsu University as an example. *Acad J Med Health Sci*. 2020;1(1):1–8.
29. Adeogun A, Faezipour M. Patient-centric paradigm: a systems thinking approach to enhance healthcare. *Healthcare*. 2025;13(3):213. doi:10.3390/healthcare13030213